

Role of AI chatbots in education: systematic literature review

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Abstract

AI chatbots shook the world not long ago with their potential to revolutionize education systems in a myriad of ways. AI chatbots can provide immediate support by answering questions, offering explanations, and providing additional resources. Chatbots can also act as virtual teaching assistants, supporting educators through various means. In this paper, we try to understand the full benefits of AI chatbots in education, their opportunities, challenges, potential limitations, concerns, and prospects of using AI chatbots in educational settings. We conducted an extensive search across various academic databases, and after applying specific predefined criteria, we selected a final set of 67 relevant studies for review. The research findings emphasize the numerous benefits of integrating AI chatbots in education, as seen from both students' and educators' perspectives. We found that students primarily gain from AI-powered chatbots in three key areas: homework and study assistance, a personalized learning experience, and the development of various skills. For educators, the main advantages are the time-saving assistance and improved pedagogy. However, our research also emphasizes significant challenges and critical factors that educators need to handle diligently. These include concerns related to AI applications such as reliability, accuracy, and ethical considerations.